

FEATURES:

- IP65**
- Auto tuning**
- PID control**
- ON/OFF control**
- Password protection**



- ✓ direct co-operation with resistance thermometers or thermocouple sensors,
- ✓ control acc. to the PID or on-off algorithm,
- ✓ one control output or alarm, relay output with make-and-break configuration, allowing to control low power objects.

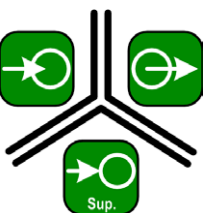
INPUTS:



OUTPUTS:

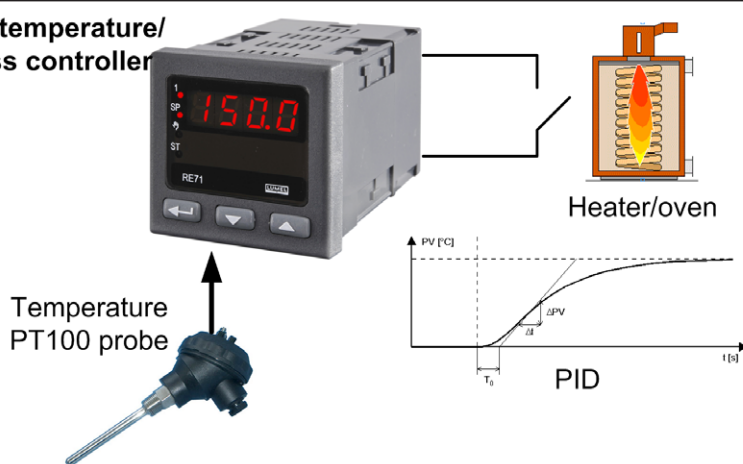


GALVANIC ISOLATION:



EXAMPLE OF APPLICATION

RE71 – temperature/ process controller



Automatic control of the heater temperature with PID with autotuning.

Sensor type	Range [°C]	Basic error [°C]	Remarks	Additional error	
Resistance thermometer (acc. to EN 60751+A2:1997), measuring current 0.25mA					
Pt100*)	-50..100	±0.8	Resistance of the sensor line <10Ω; one must connect with wires of the same section and length	Additional errors in rated operating conditions caused by: <ul style="list-style-type: none"> • compensation of reference junction temperature changes ≤2°C • line resistance change of the RTD sensor ≤50% of the basic error value • change of the ambient temperature ≤100% of the basic error/10K 	
	0..250	±1.3			
	0..600	±3.0			
Thermocouple of J type (acc. to PN-EN 60584-1:1997)					
Fe-CuNi	0..250	±2.0			
	0..600	±3.0			
	0..900	±4.0			
Thermocouple of K type (acc. to PN-EN 60584-1:1997)					
NiCr-NiAl	0..600	±3.0			
	0..900	±4.0			
	0..1300	±6.0			
Thermocouple of S type (acc. to PN-EN 60584-1:1997)					
PtRh10-Pt	0..1600	±8.0			

OUTPUTS

Output kind	Properties
voltageless relay	switching contact, overload capacity: 5A/230V
binary voltage	voltage 6V, resistance limiting the current : 10Ω

PARAMETERS OF WORK

Detection of error in the measurement circuit:	thermocouple Pt100	overflow of measuring range
Way of output operation	reverse: for heating	direct: for cooling
Signalling of:	active output, set point value, self-tuning	

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EXTERNAL FEATURES

Weight	<0,25 kg	
Dimensions	48 x 48 x 93 mm	
Protection level (acc. to EN 60529)	ensured by the housing: IP65	from the terminal side: IP20
Fitting	on a 35 mm rail	acc. to EN 60715

RATED OPERATING CONDITIONS

Supply voltage	230 V a.c. \pm 10%, 50/60Hz	power consumption: <3 VA
Temperature	ambient: 0..23..55 °C	storage: -20..70 °C
Relative humidity	\leq 85%	condensation inadmissible
Working position	any	
Preheating time	30 min	
Avarging time	\geq 0,33 s	
External magnetic field	< 400 A/m	

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emission	acc. to EN 61000-6-4
Insulation between circuits	basic	
Pollution degree	2	
Installation category	III	
Maximal phase-to-earth working voltage	for the supply circuit, outputs: 300V	acc. to EN 61010-1
	for input circuit: 50V	
Altitude above sea level	<2000 m	

CONNECTION DIAGRAMS

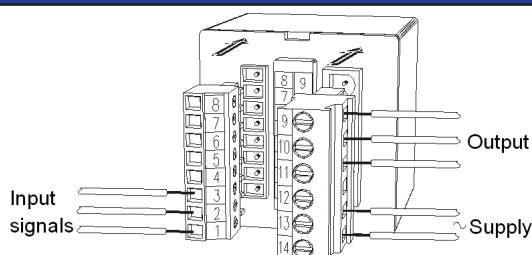


Fig. 1 View of the controller connection strips

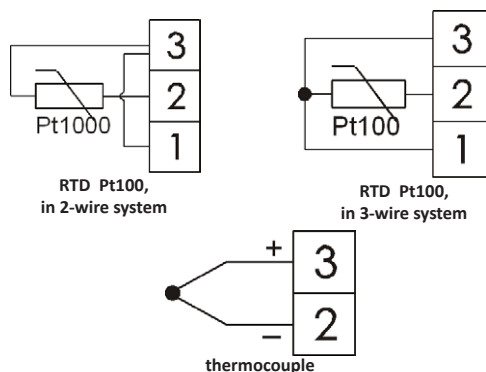


Fig. 2. Connection of input signals

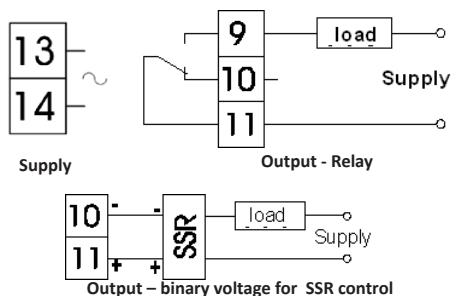


Fig. 3. Connection of the supply and load circuit

ORDERING

ORDERING CODES:

	RE71 - XX	X	X	X
Input signal:				
RTD Pt100 (-50..100°C)	01			
RTD Pt100 (0..250°C)	02			
RTD Pt100 (0..600°C)	03			
Thermocouple J (Fe-CuNi)(0..250°C)	04			
Thermocouple J (Fe-CuNi)(0..600°C)	05			
Thermocouple J (Fe-CuNi)(0..900°C)	06			
Thermocouple K (NiCr-NiAl)(0..600°C)	07			
Thermocouple K (NiCr-NiAl)(0..900°C)	08			
Thermocouple K (NiCr-NiAl)(0..1300°C)	09			
Thermocouple S (PtRh10-Pt)(0..1600°C)	10			
Output:				
relay		1		
binary 0/6 V for SSR control		2		
Kind of execution				
standard				00
custom-made*				XX
Acceptance tests:				
without extra quality inspection requirements				8
with an extra quality inspection certificate				7
acc. to customer's agreements				X

* - the code will be established by the manufacturer

Order example:

The code **RE71 - 06 2 00 8** means
RE71 - temperature controller of RE71 type
06 - input: TC J, (0..900°C)
2 - output: binary 0/6 V for SSR control
00 - standard execution
8 - without extra quality inspection requirements

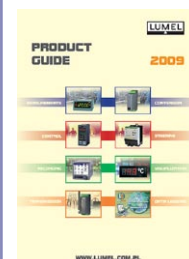
SEE ALSO:



N25T meter for measurement of temperature from thermoresistors and thermocouples sensors. For more details check DIGITAL METERS catalogue or visit our website.



Check our offer of different controllers in TEMPERATURE CONTROLLERS and POWER CONTROLLERS catalogue or on our website.



For more information about products check Product Guide 2009 catalogue or visit our website.

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